

FIGURE 1

pICLIP<sub>S</sub>/HPV16<sub>C+50-68+GUU</sub>

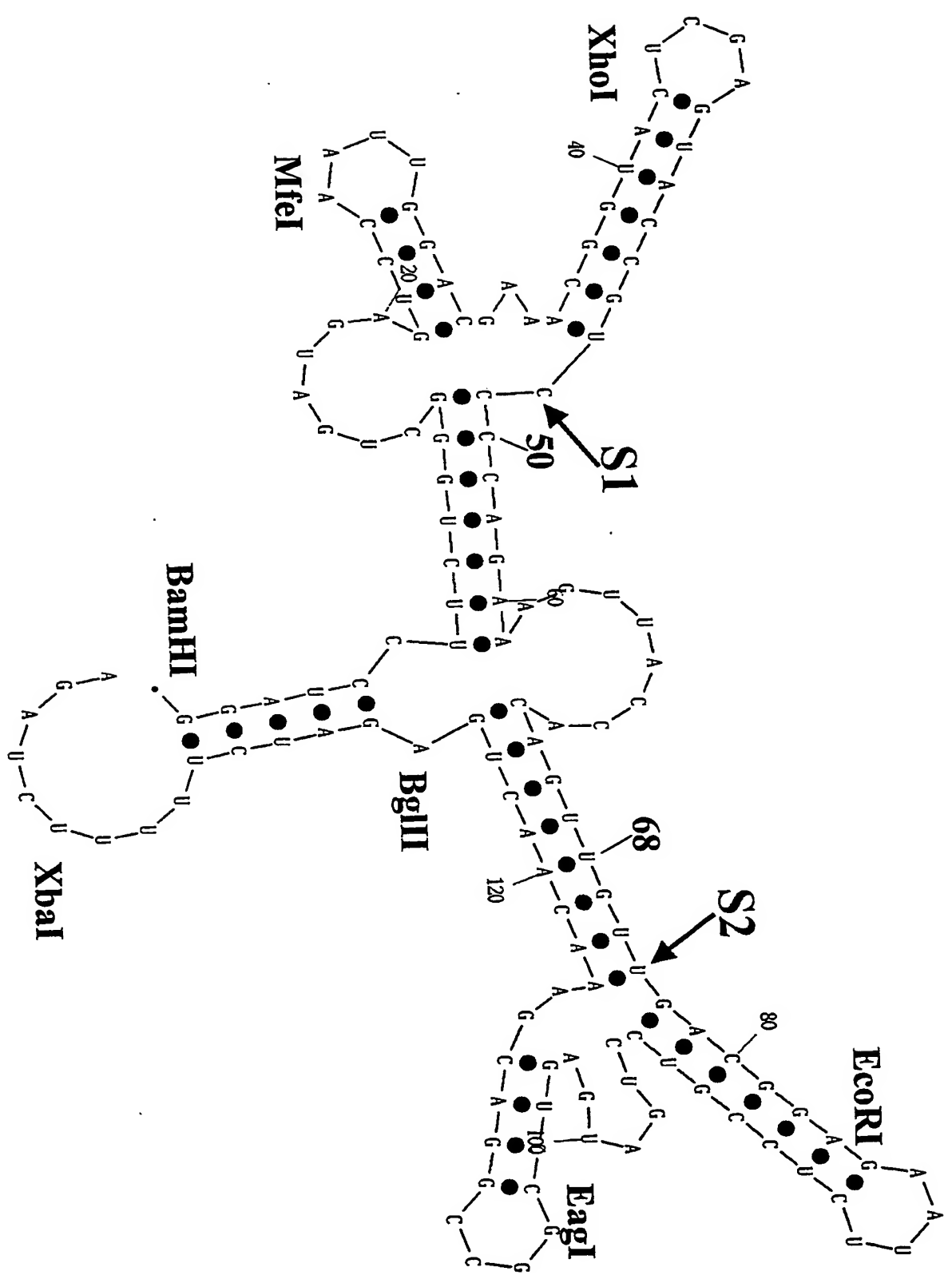


FIGURE 2

p1C<sub>L</sub>HP<sub>AS</sub>/HPV16<sub>C+68-50+GUU</sub>

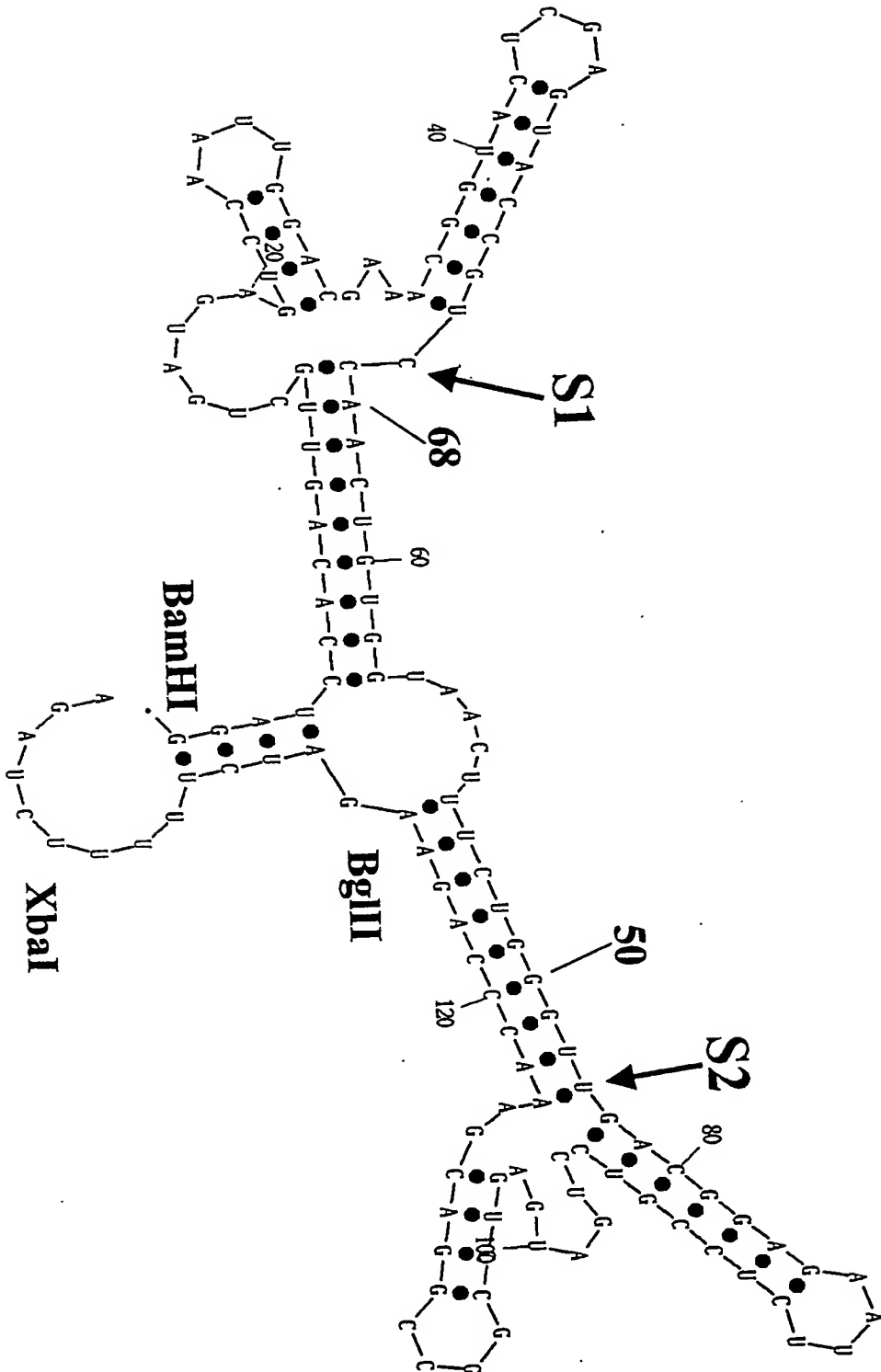
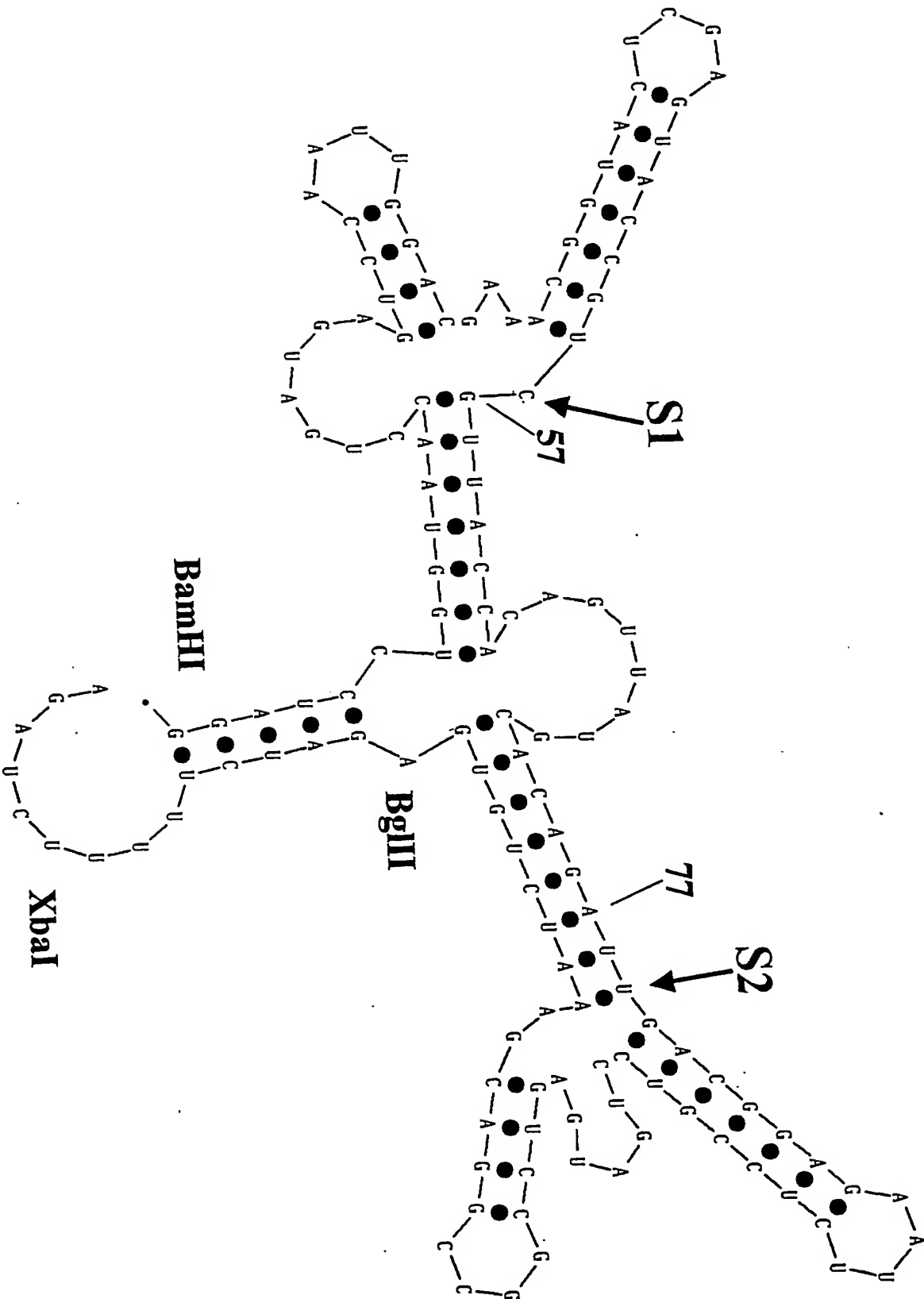


FIGURE 3

pICLIP<sub>S</sub>/HPV16<sub>57-77+UU</sub>

**PICTIP<sub>AS</sub>/HPV16<sub>77-57+UU</sub>**

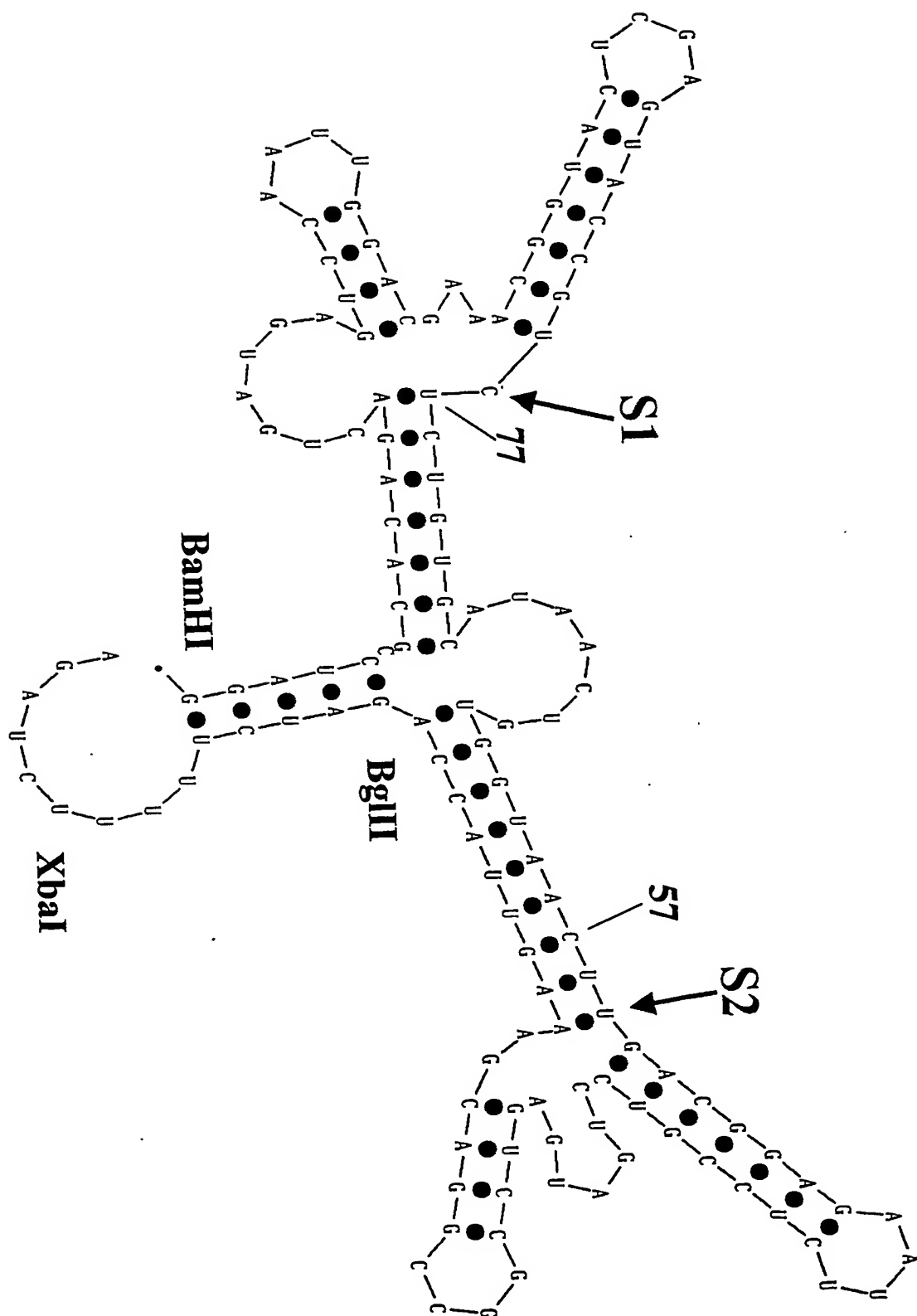
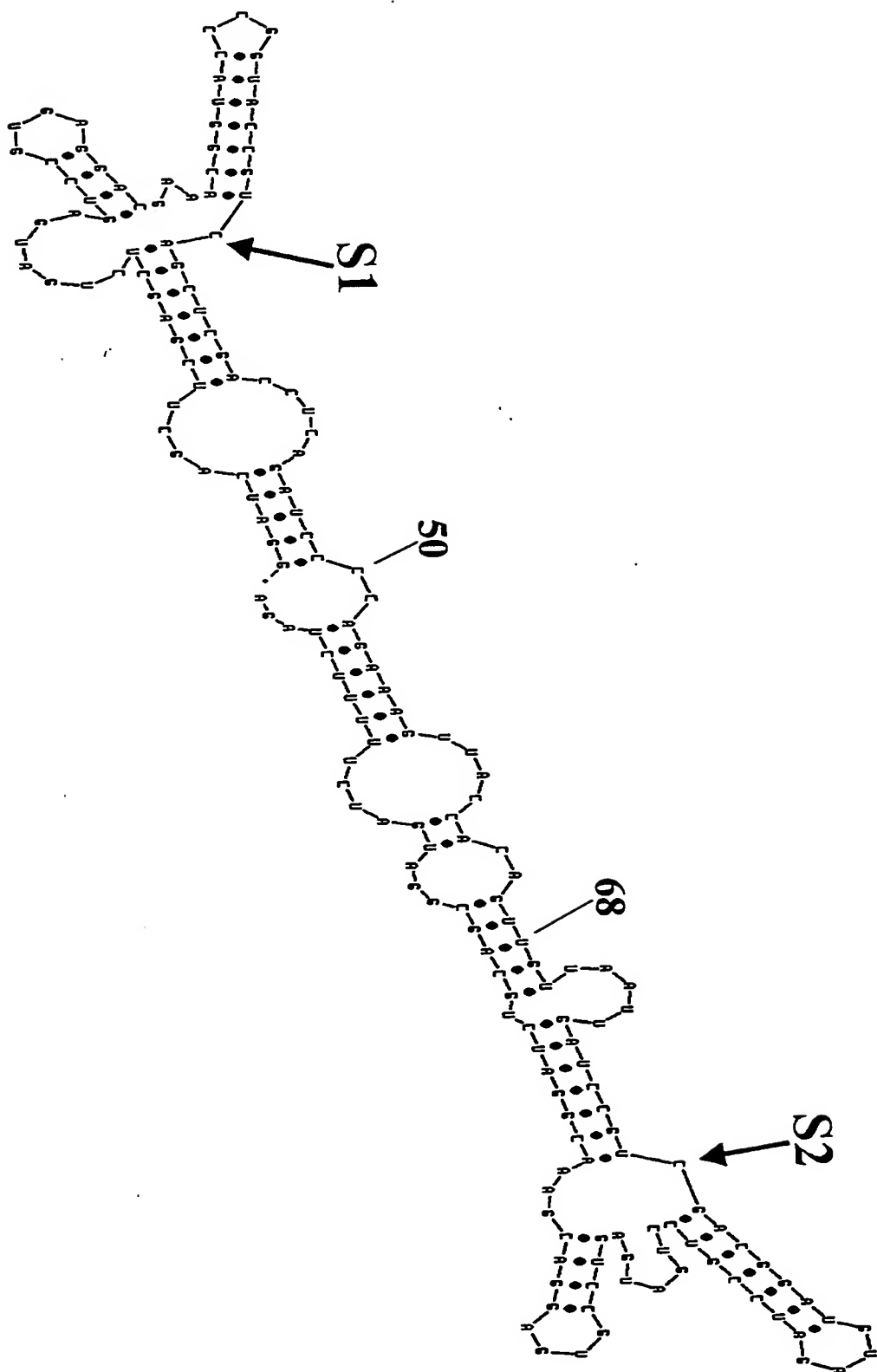


FIGURE 5

p2CLIP<sub>S</sub>/HPV16<sub>C+50-68+CUU</sub>



6/26

FIGURE 6

p2CLIP<sub>AS</sub>/HPV16<sub>C+68-50+GUU</sub>

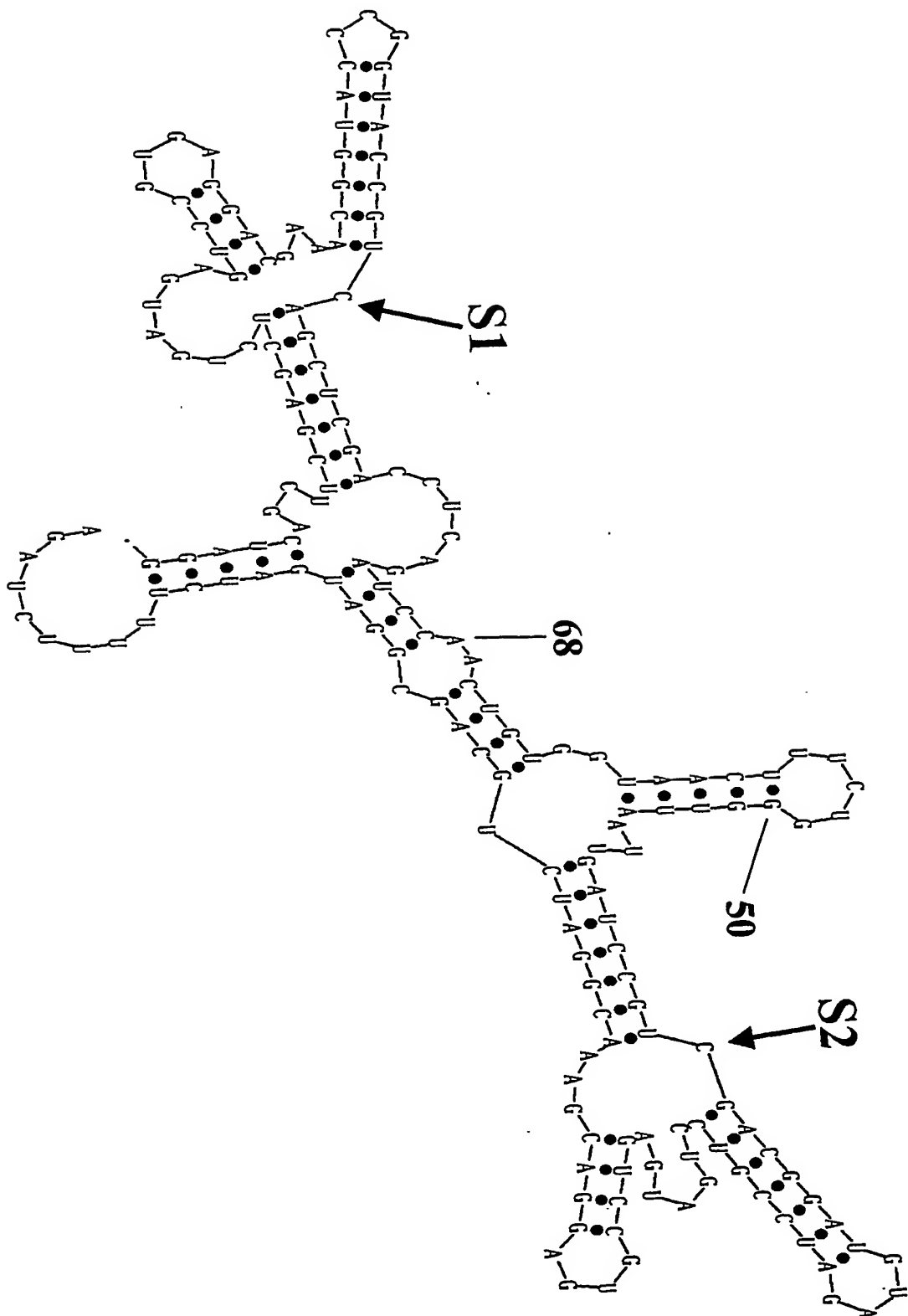


FIGURE 7

**PICHO<sub>S</sub>/HPV16<sub>C+50-68+GUU</sub>**

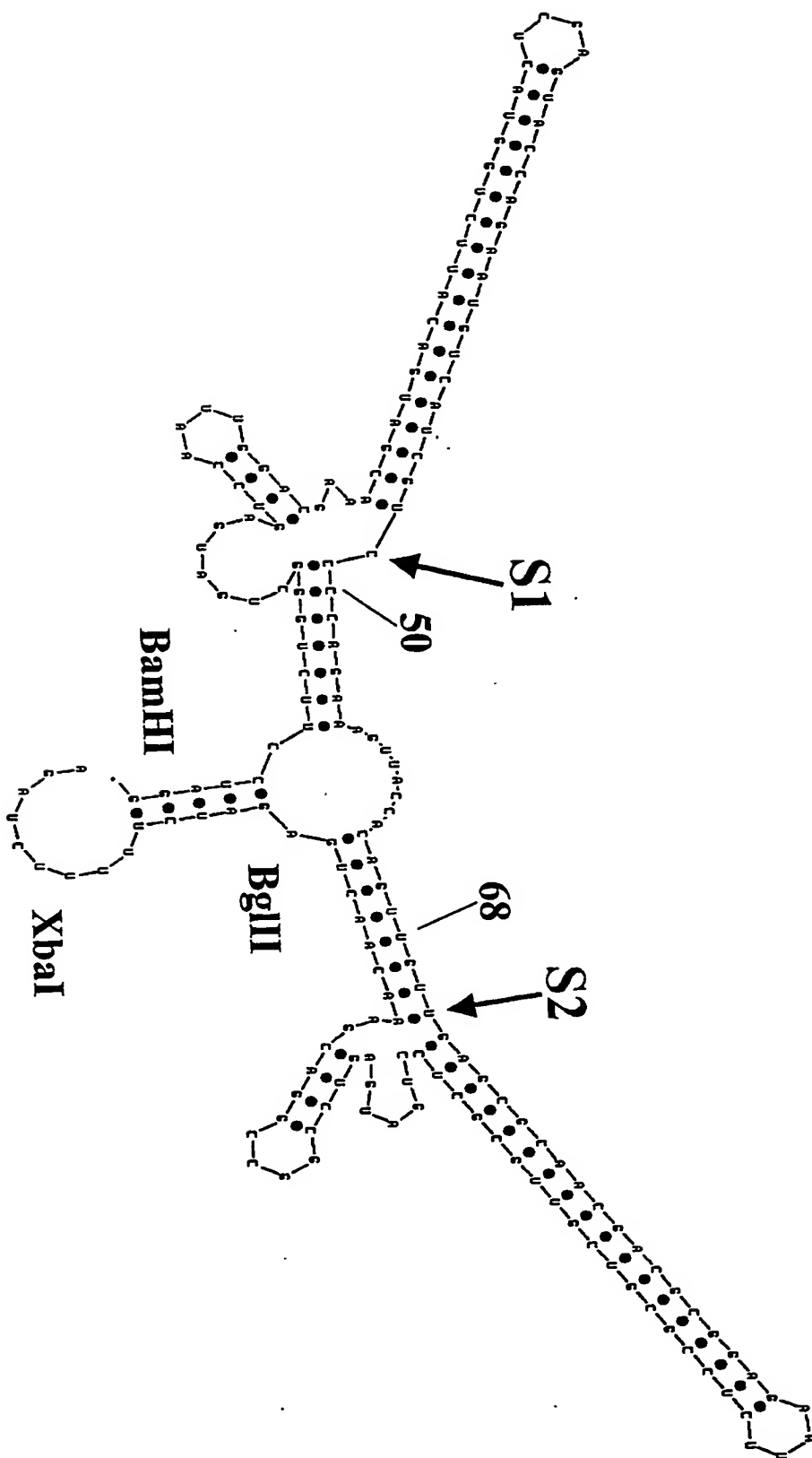
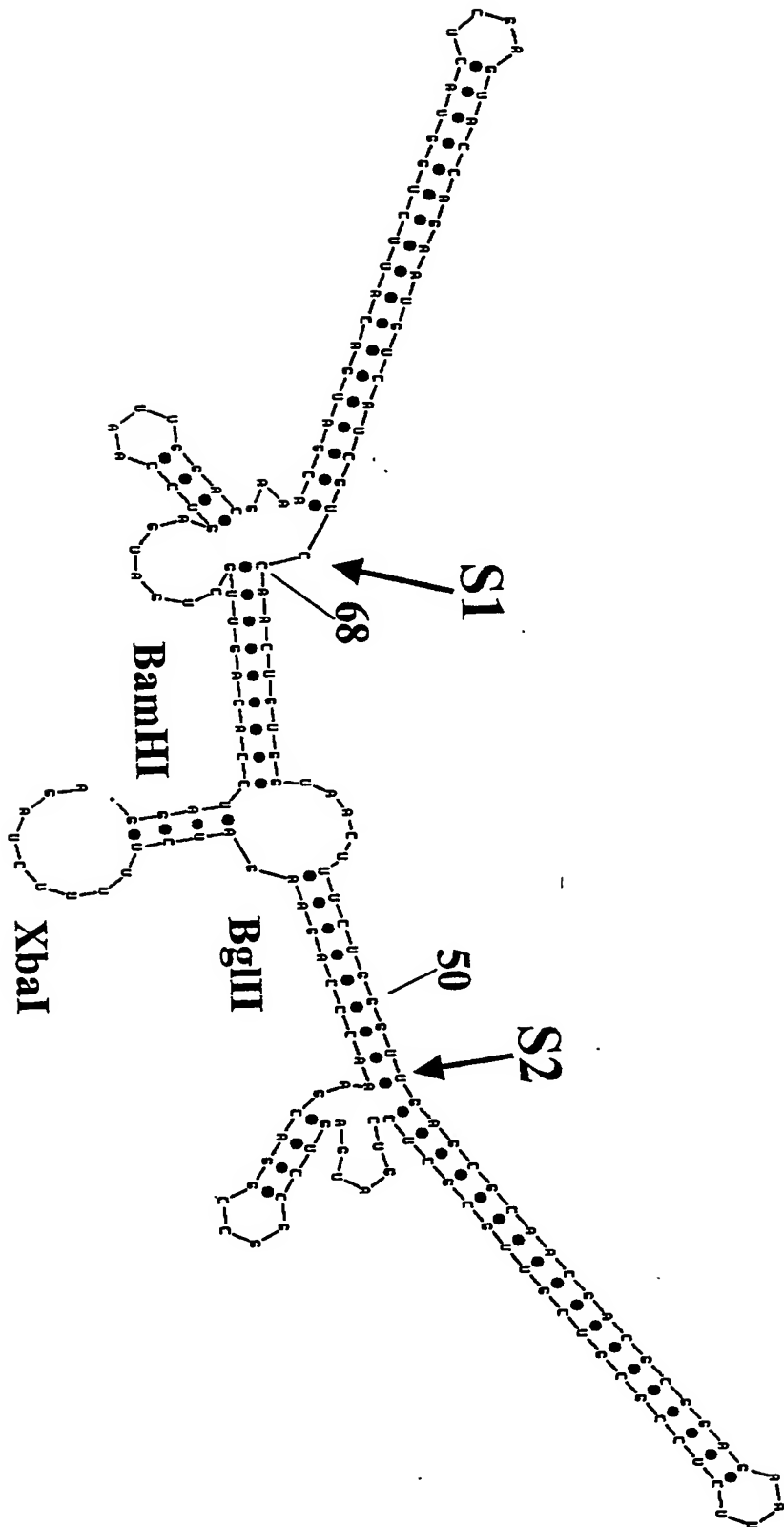


FIGURE 8

p1CHOP<sub>AS</sub>/HPV16<sub>C+68-50+GUU</sub>

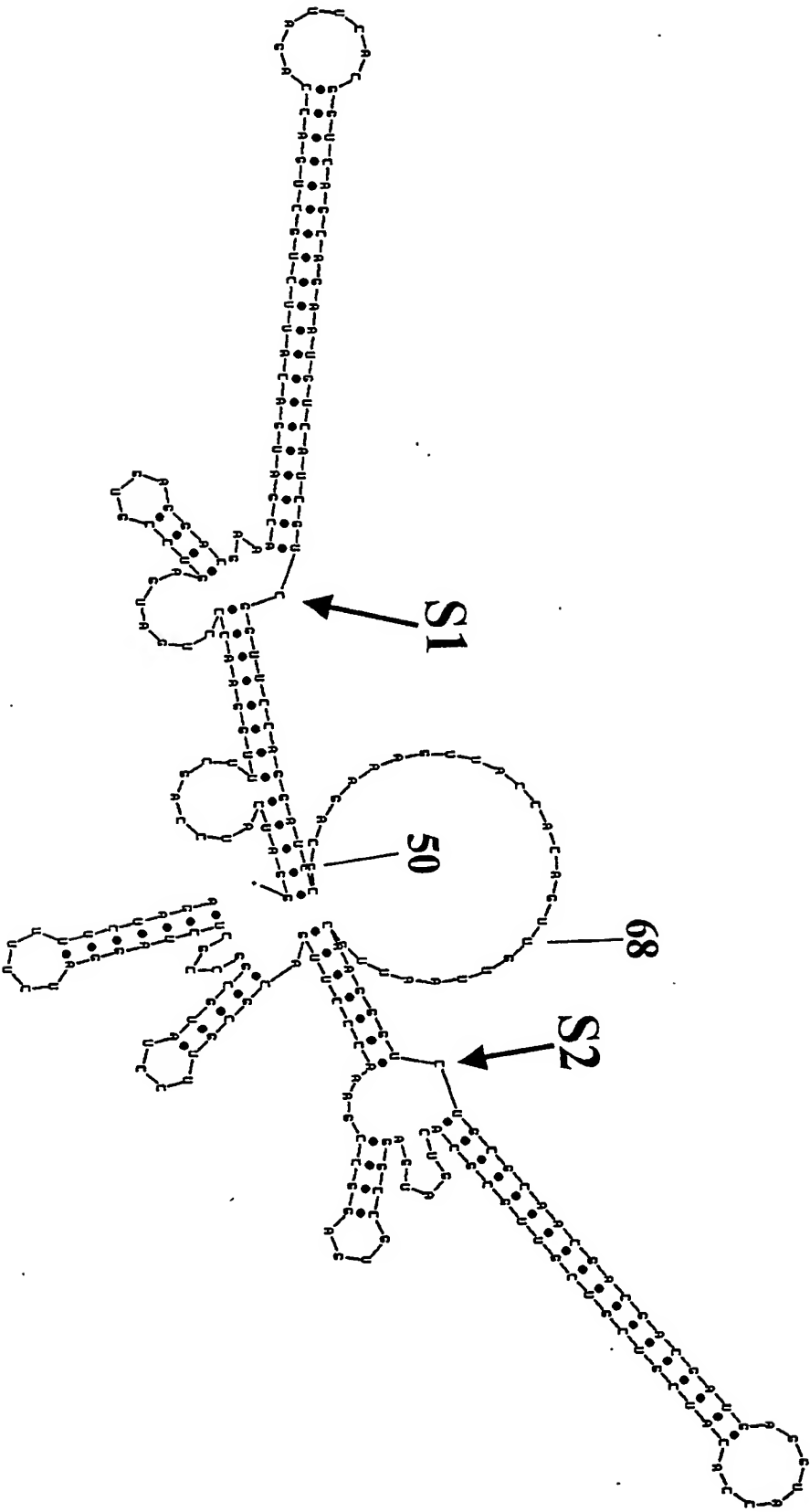




9/26

FIGURE 9

p2CHOP<sub>s</sub>/HPV16<sub>C+50-68+GUU</sub>



10/26

FIGURE 10

**p2CHOP<sub>AS</sub>/HPV16<sub>C+68-50+GUU</sub>**

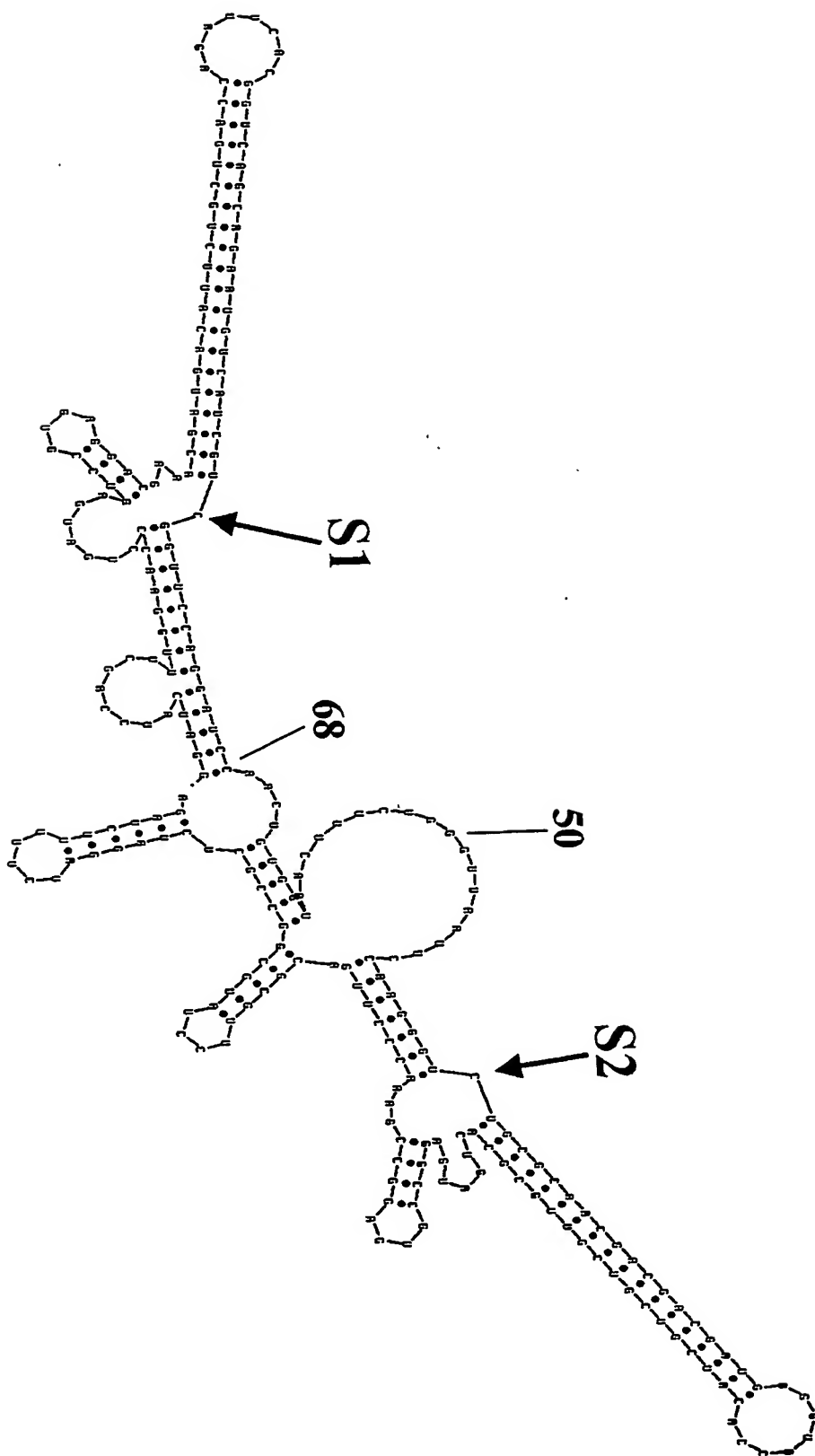
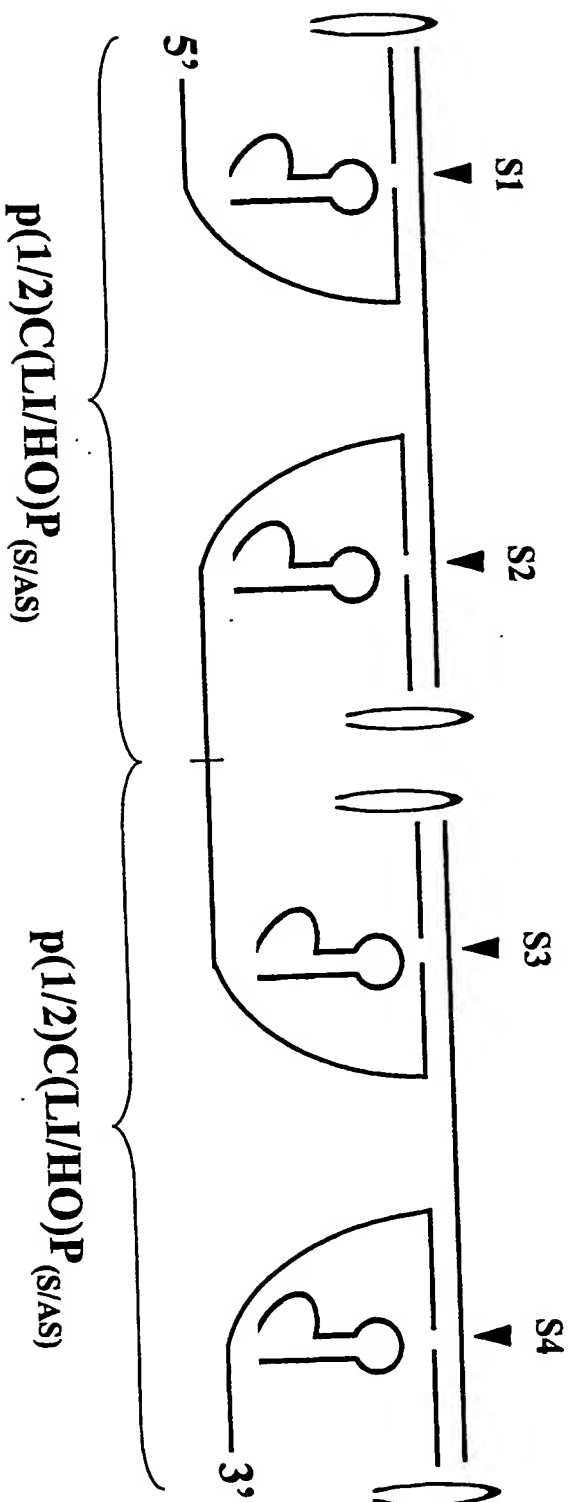


FIGURE 11

# A. pSIR (Small Interfering RNA) Cassette



## B. Expression Construct of pSIR Cassette

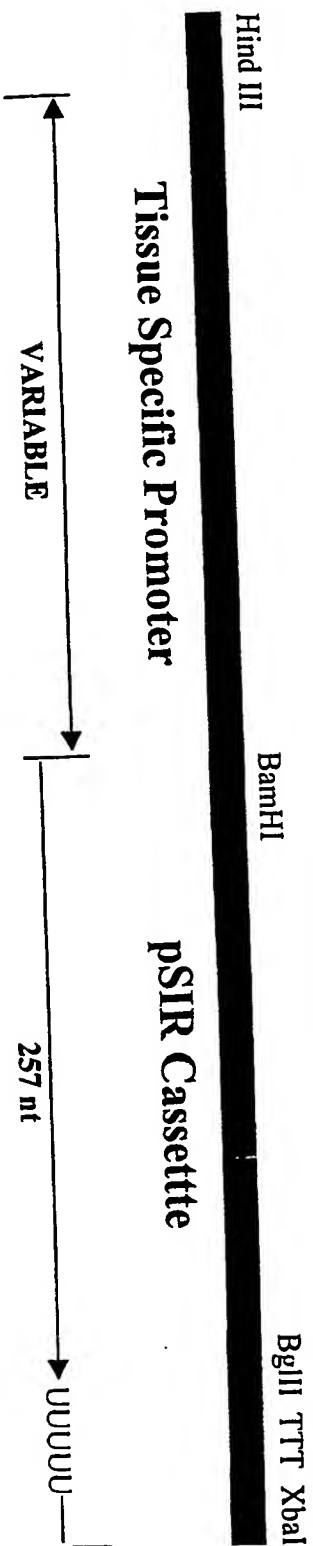


FIGURE 12

**Self-Liberated Small Interfering (SI) RNA from pSIR Cassette**pSIR/HPV16si<sub>C+50-68+GUU</sub>

|        |                                                             |                        |
|--------|-------------------------------------------------------------|------------------------|
| S1-S2: | 5' - C - C C A G A A G U U A C C C A C A G U U - G U U - 3' | HPV16 <sub>50-68</sub> |
| S4-S3: | 3' - U U G - G G U C U U U C A A U G G U G U C A A - C - 5' | HPV16 <sub>68-50</sub> |

pSIR/HPV16si<sub>57-77+UU</sub>

|        |                                                         |                        |
|--------|---------------------------------------------------------|------------------------|
| S1-S2: | 5' - G U U A C C A C A G U U A U G C A C A G A U U - 3' | HPV16 <sub>57-77</sub> |
| S4-S3: | 3' - U U C A A U G G U G U C A A U A C G U G U C U - 5' | HPV16 <sub>77-57</sub> |

pSIR/HPV16si<sub>862-882+UU</sub>

|        |                                                         |                        |
|--------|---------------------------------------------------------|------------------------|
| S1-S2: | 5' - U U G G A G C U A C U G U G G A G U U A U U - 3'   | HBV <sub>862-882</sub> |
| S4-S3: | 3' - U U A A A C C U C G A U G A C A C C U C A A U - 5' | HBV <sub>882-862</sub> |

FIGURE 13

**Self-Liberated Small Interfering (SI) RNA from pSIR Cassette**

5' Sequence of p2CLIP: 5' - AGCUCGACCCTCAGAUC (Bgl II/Bam HI) -3'  
 3' Sequence of p2CLIP: 5' - (Mfe I/Eco RI) AAUUGAUCCGUC-3'  
 5' Sequence of p2CHOP: 5' - GGUUCCAGGAUC (Bgl II/Bam HI) -3'  
 3' Sequence of p2CHOP: 5' - (Mfe I/Eco RI) AAUUCCAAGGGUC-3'

p2CLIP or p2CHOP/HPV16<sub>C+50-68+GUU</sub>

5' - GAUCCCCAGAAAGUUACCAAGUUGUUAUU-3' HPV16<sub>50-68</sub>  
 3' - UUAAGGUCUUUCAUUGGUGUCAACACAUG-5' HPV16<sub>68-50</sub>

p2CLIP or p2CHOP/HPV16<sub>57-77+UU</sub>

5' - GAUCGUUACCAAGUUAUGCACAGAUUAUU-3' HPV16<sub>57-77</sub>  
 3' - UUAACAUGGUGUCAUACGUGUCUACAUG-5' HPV16<sub>77-57</sub>

p2CLIP or p2CHOP/HBV<sub>862-882+UU</sub>

5' - GAUCUUUGGAGCUACUGUGGAGUUAUUAAUU-3' HBV<sub>862-882</sub>  
 3' - UUAAAAACCUCGAUGACACCUCAAUACAUG-5' HBV<sub>882-862</sub>

14/26

FIGURE 14

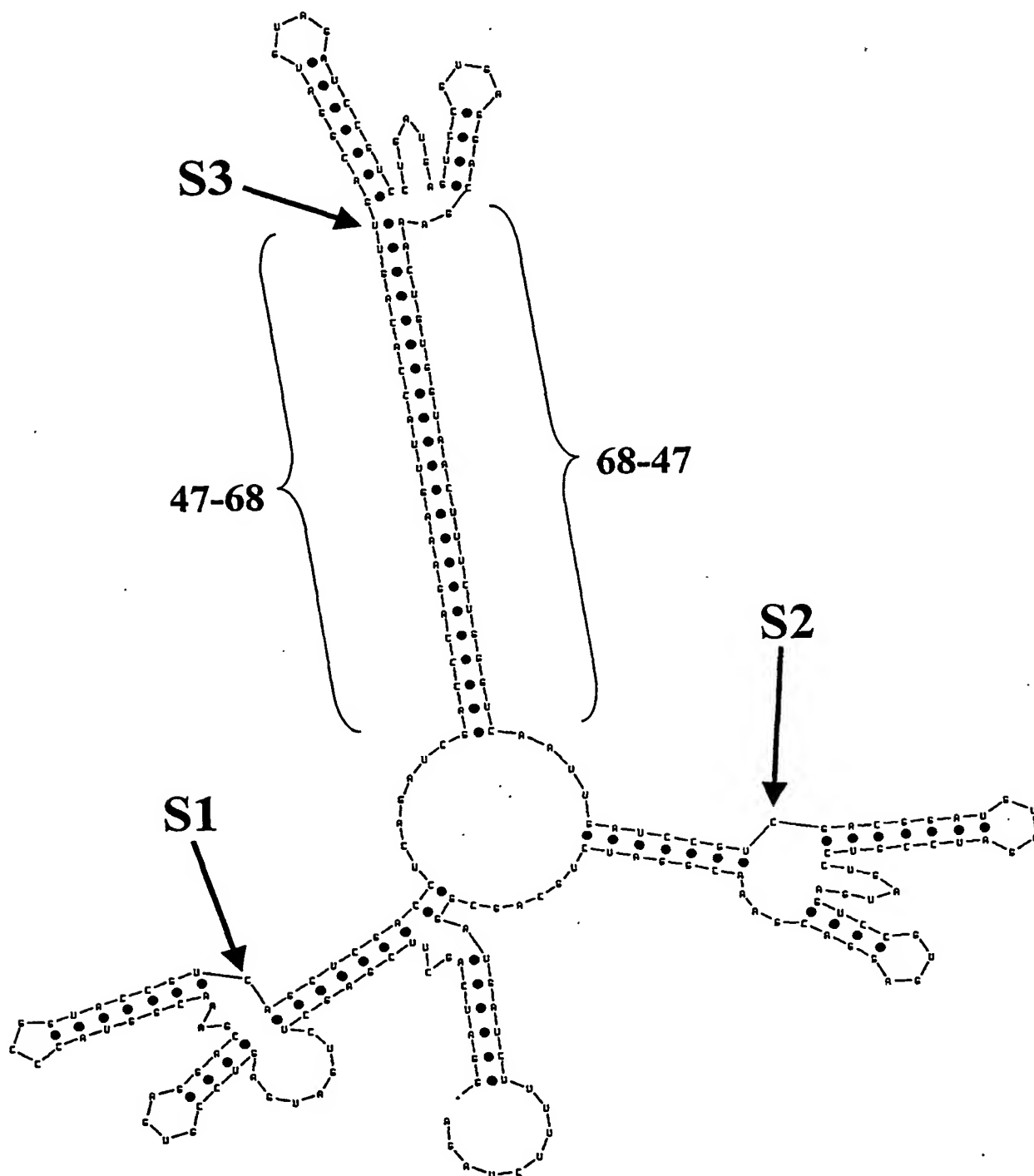
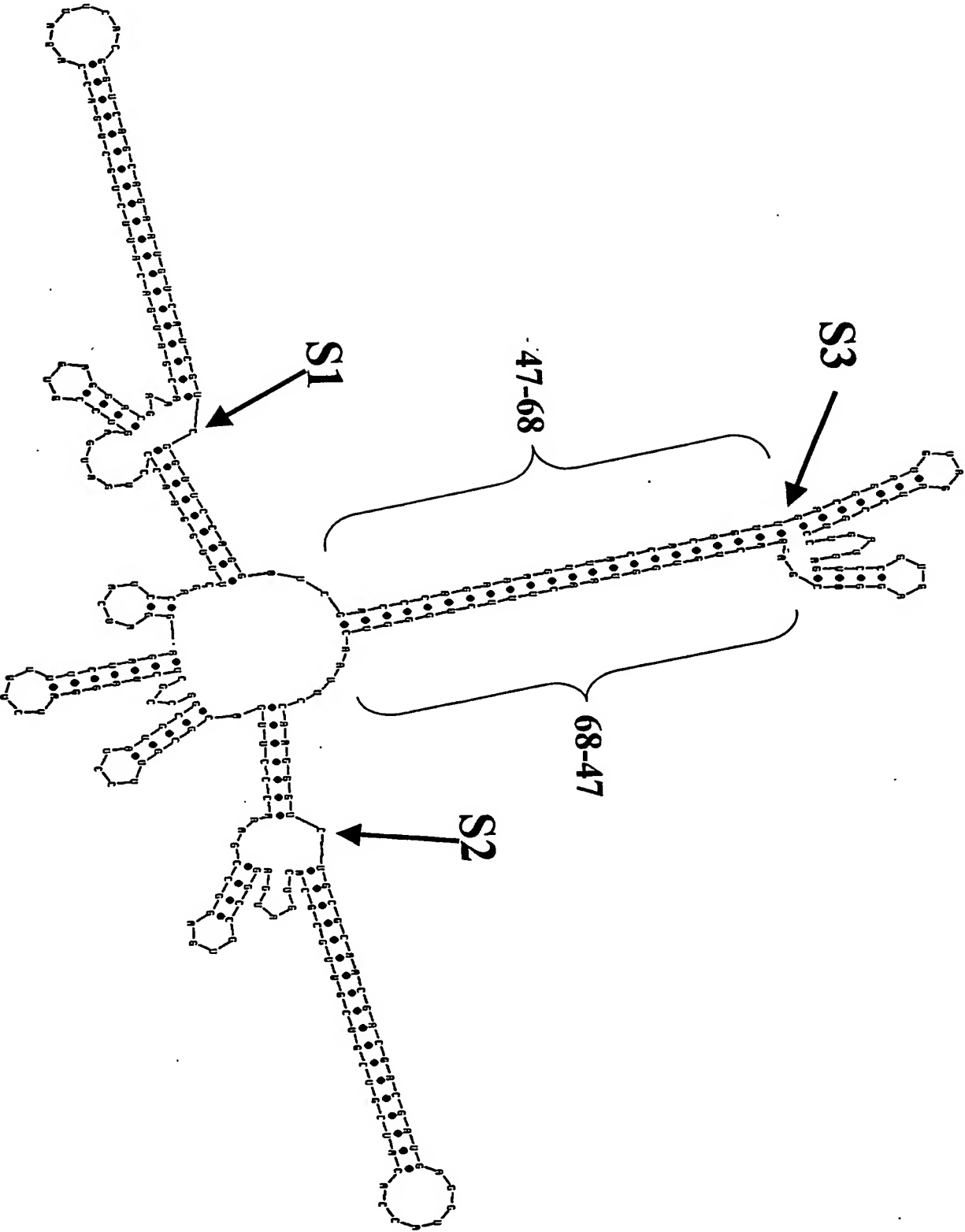
**p2CLIP<sub>HR</sub>/HPV16<sub>47-68</sub>**

FIGURE 15  
p2CHOP<sub>HR</sub>/HPV16<sub>47-68</sub>



# HR Inserts for Cassettes

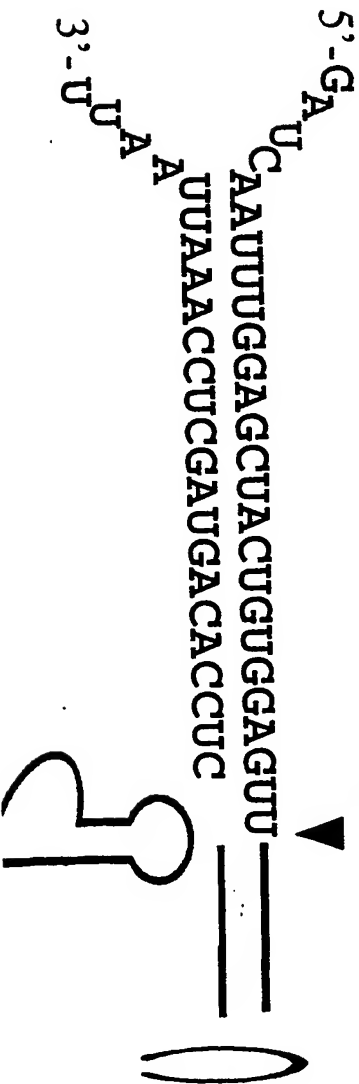
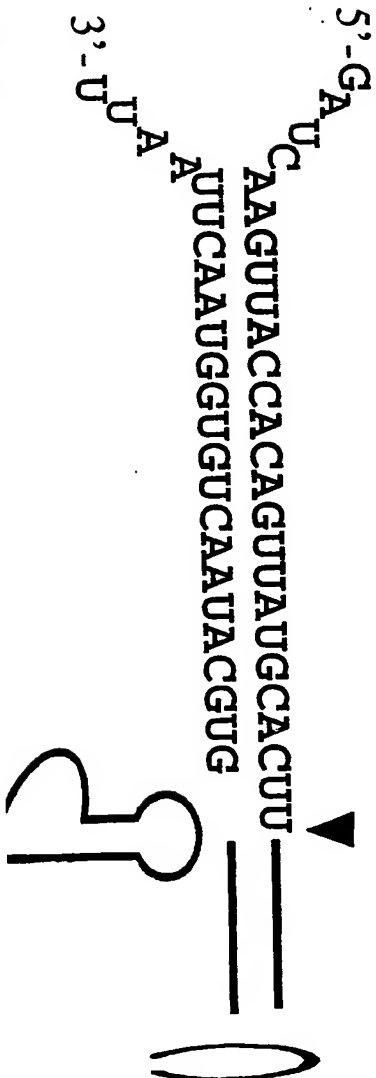
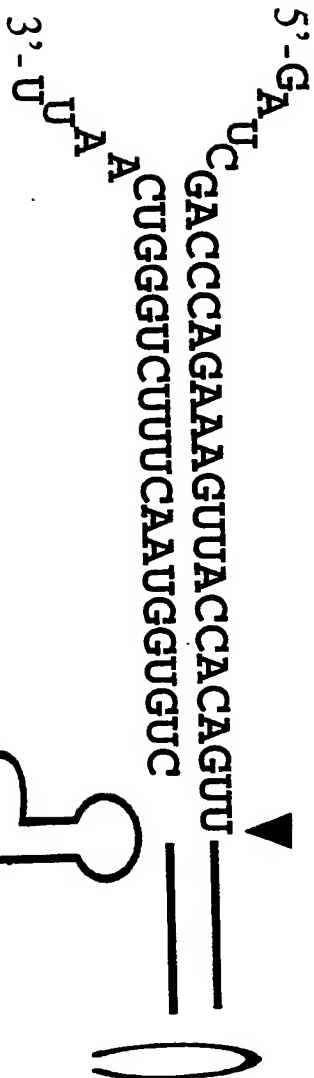






FIGURE 18

18/26

p2CLIP<sub>HP</sub>/HPV16<sub>C+50-68+GUU</sub>

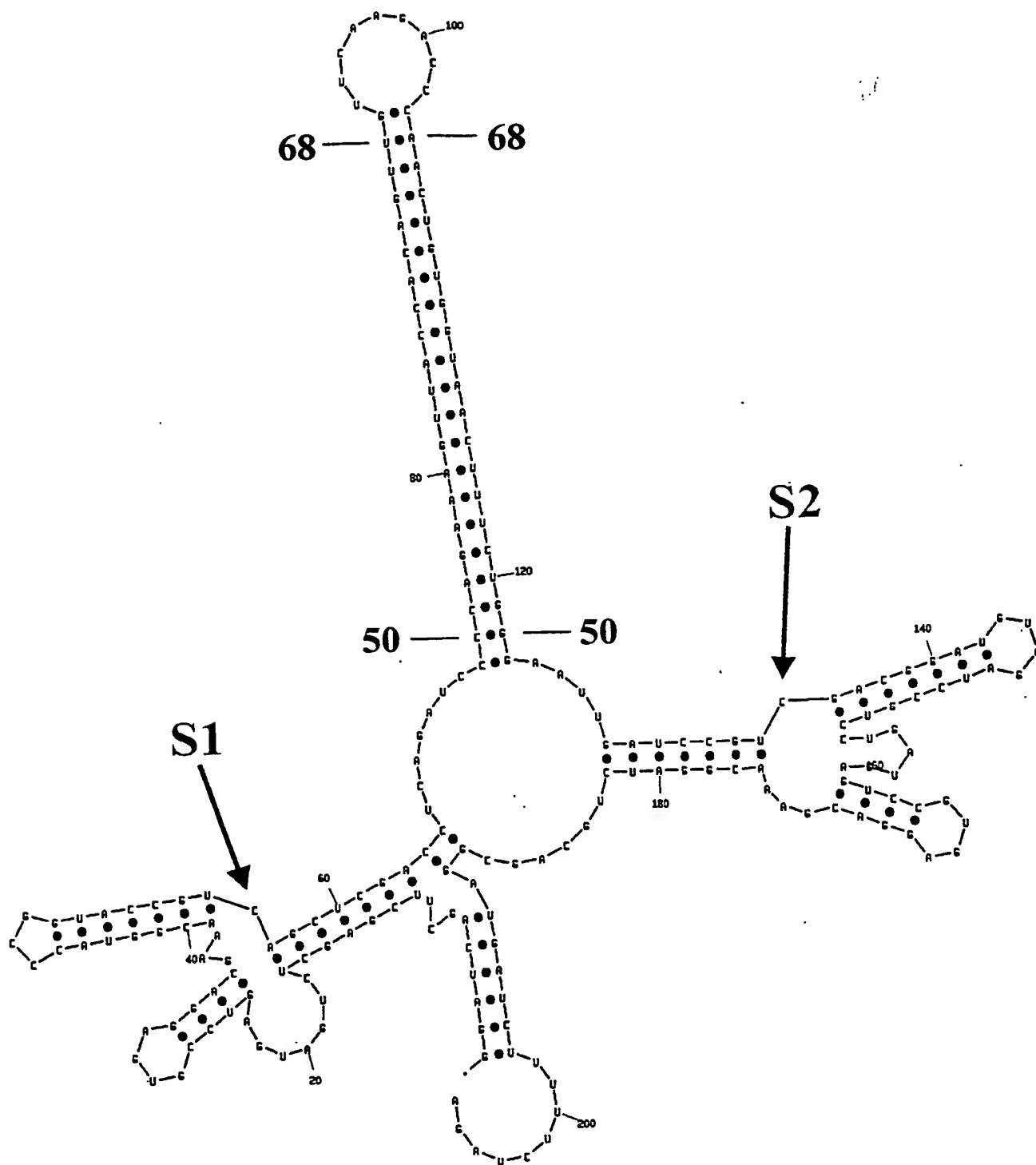


FIGURE 19

# Self-Liberated Hair-Pin Loop (HP) from pCLIP/pCHOP Cassettes

HPV16<sub>C+50-68+GUU</sub>

5'-CCCAAGAAAGUACCAAGUUG  
3'-UUGGUCUUUCCAUGGUGUACAAC

U C A  
C A G

HPV16<sub>57-77+UU</sub>

5'-GUUACCAAGUUAUGCACAGA  
3'-UUCAUUGGUGUACAUAAGUGUCU

U C A  
C A G

HBV16<sub>862-882+UU</sub>

5'-TTTGAGCTACTGTGAGTTA  
3'-UUAACCTCGATGACACCTCAAT

U C A  
C A G

FIGURE 20

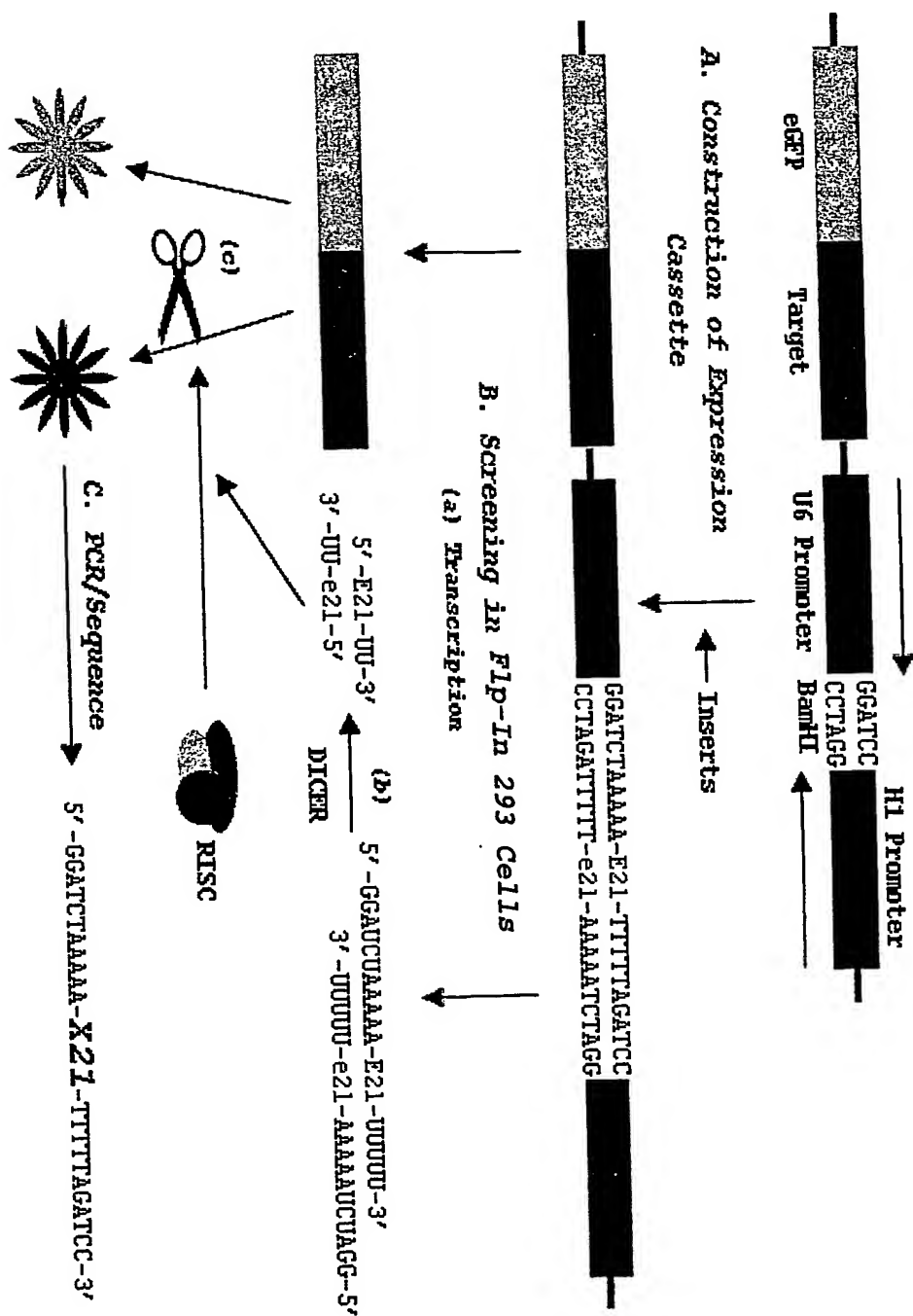


FIGURE 21

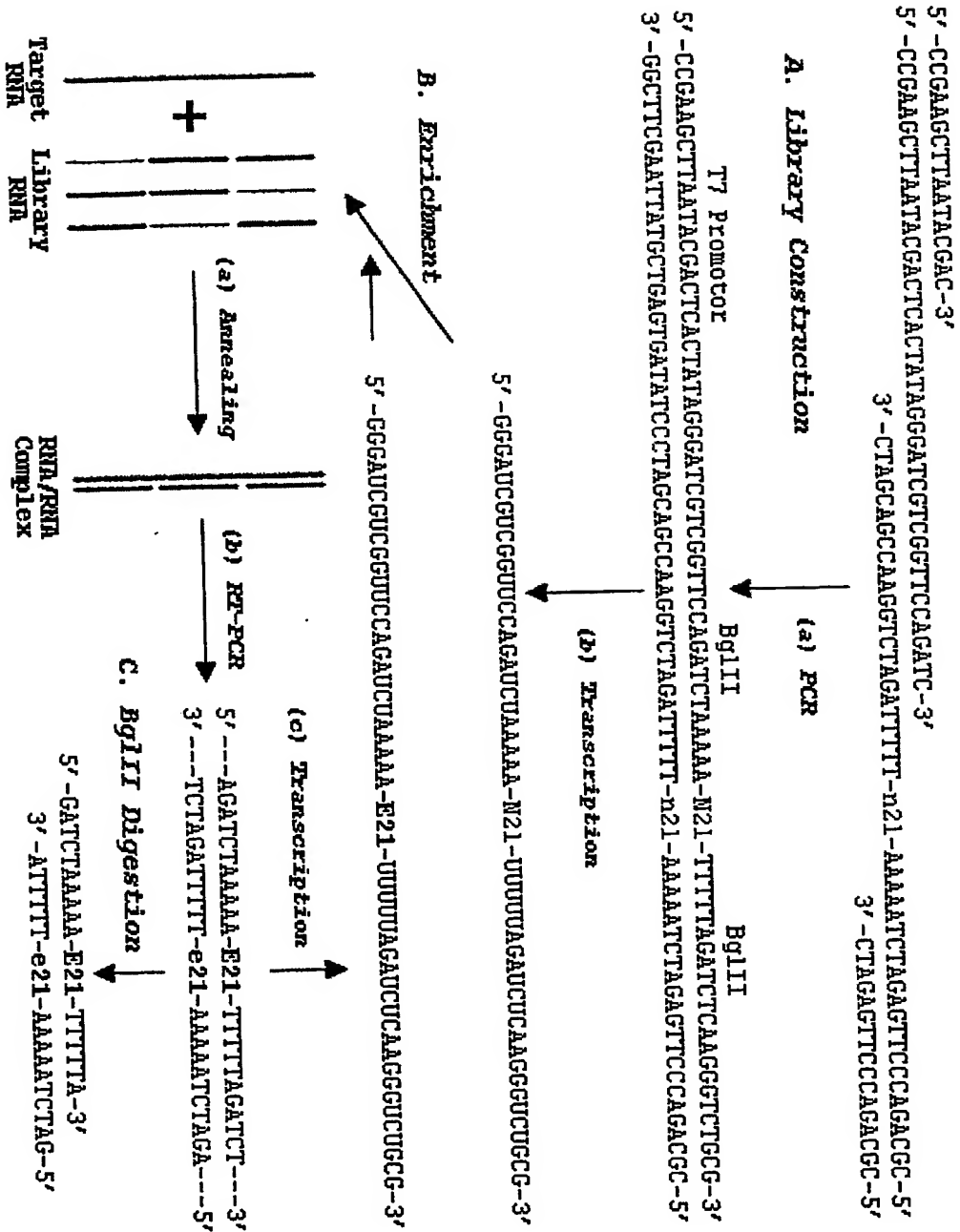
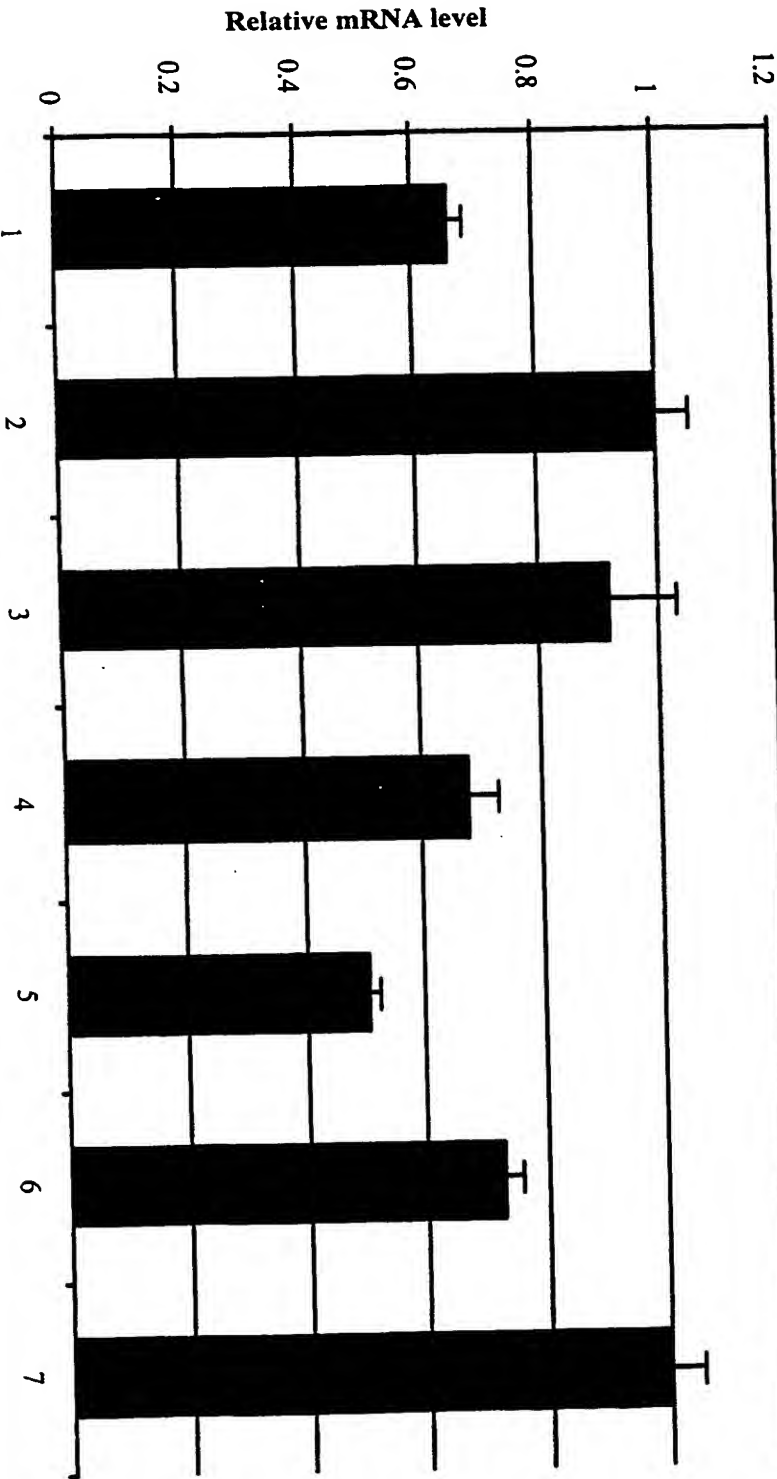


FIGURE 22  
Down-Regulation of HPV16 mRNA by siRNA Constructs in Cells



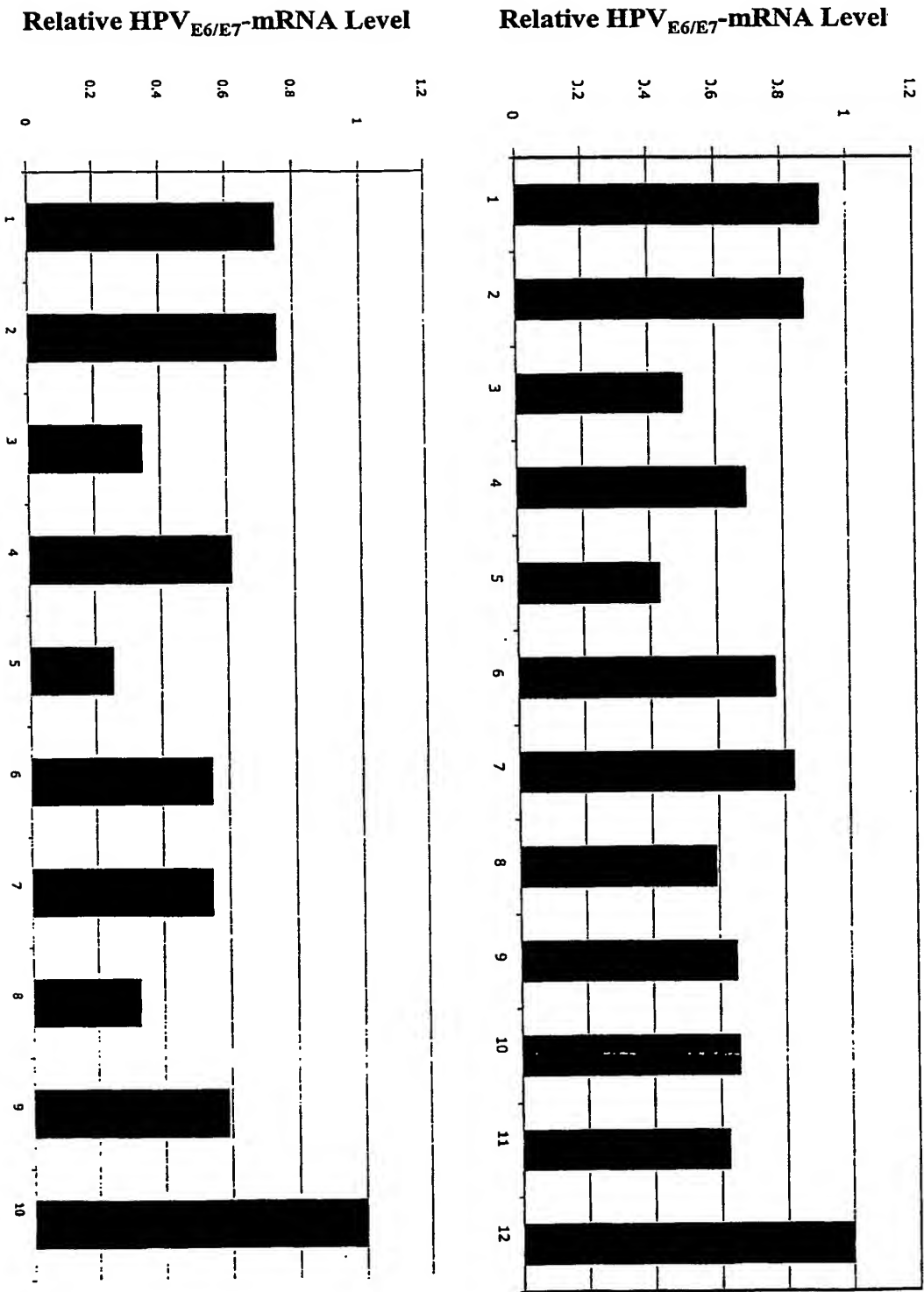
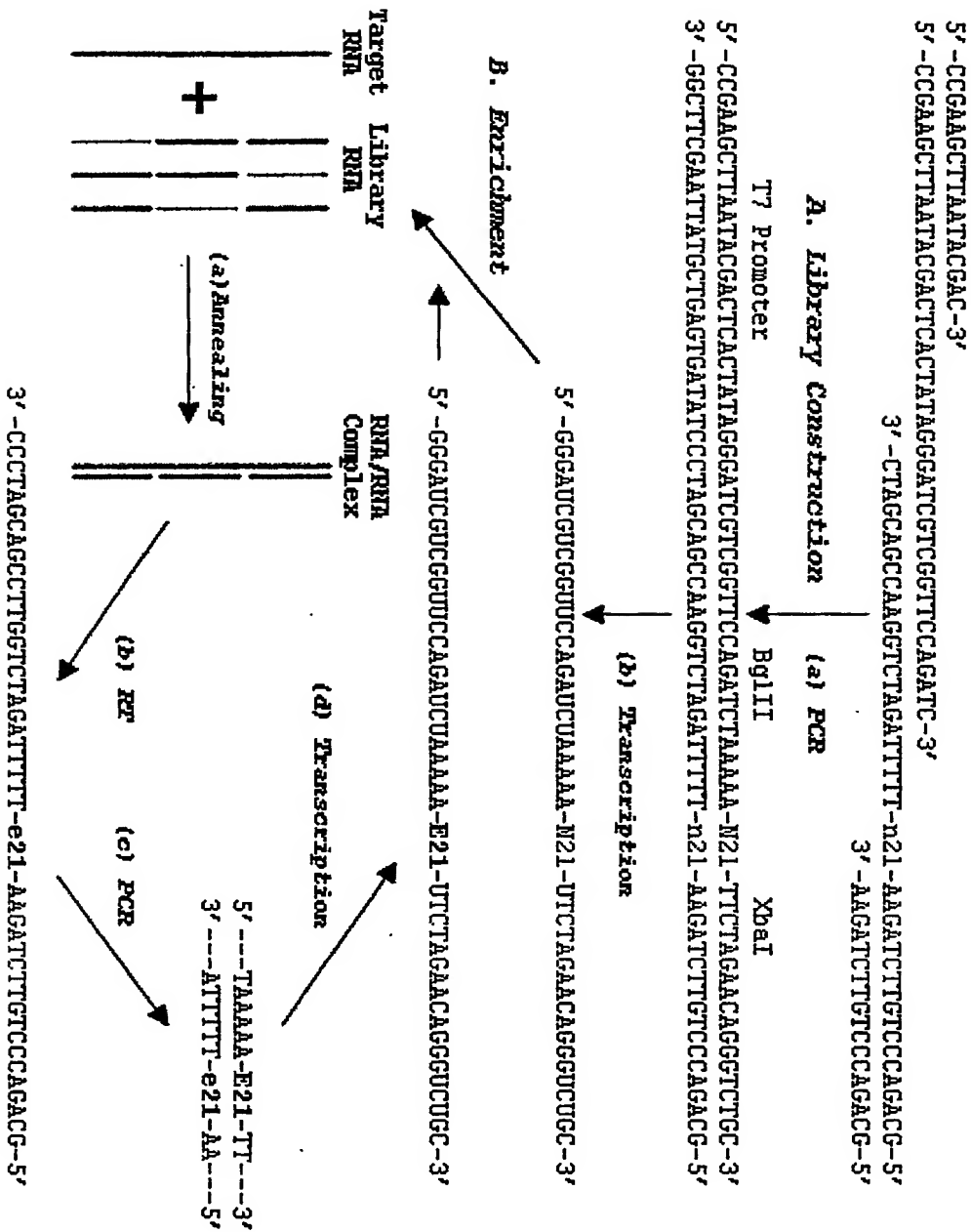


Figure 23

FIGURE 24





5'-GGGATCGTCGGTCCAGATC-3'  
3'-CCTTAGCAGCCAAAGCTTAGATTTT-e21-AAAGATCTTGTCCAGACG-5' cDNA from Figure 24

3'-TTCAGTTCAGTTCAGCGTCTGGGACAGATCTT-5'

(a) Addition of Marijuana

5'-GGGATCGTCGGTTCAGATCTAAAAA-E21-TTCTAGACACAGGCTCGCAATTCAGTTCAAGTTTCGACACCTGTTCTAGAA-3'

**(b) Cis-Extension**

5'-GGGATCGTCGGTTCACATCTAAAA-E21-TTCTAGAACAGGCTTC<sup>A</sup><sub>G</sub>

3'-CCCTAGCAGCCAGGTCTAGATTTT-e21-AAGATCCTGGGCCAGACGCTTGAC<sup>T</sup>  
BglII XbaI

116AAC  
(c) Full-length Amplification

5'-GGGATCGTCGGTTCAGATCTAAAAA-E21-TTCTAGA-----TCTAGAA-e21-TTTTLAGATCTGGAACCGACGATCCC-3'

3'-CCCTAGCAGCCAGCTAGATTTC-e21-AAGATCU-----AGATCTT-E21-AAAACTAGACCTTGCTGCTAGGG-5'

XbaI BglII

(a) Bg111/Cloring

5'-GATCTAATAA-E21-TTTAGACACGGTCTCCAGTTCAGTTCAGTTCGACAGCCCTGTTTAGAA-e21-TTTTAA-3'

Xba

Bq111

5'-GATCTAAAAA-E21-TTCTAGAA-e21-TTTTA-3'

3'-ATTITT-e21-AGGATCTT-E21-AAAAATCTAG-5'

Bq111

FIGURE 26

